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Slides Available at:

<https://www.iihr.uiowa.edu/cjones/welcome/>



IIHR Water Quality Sensor Network

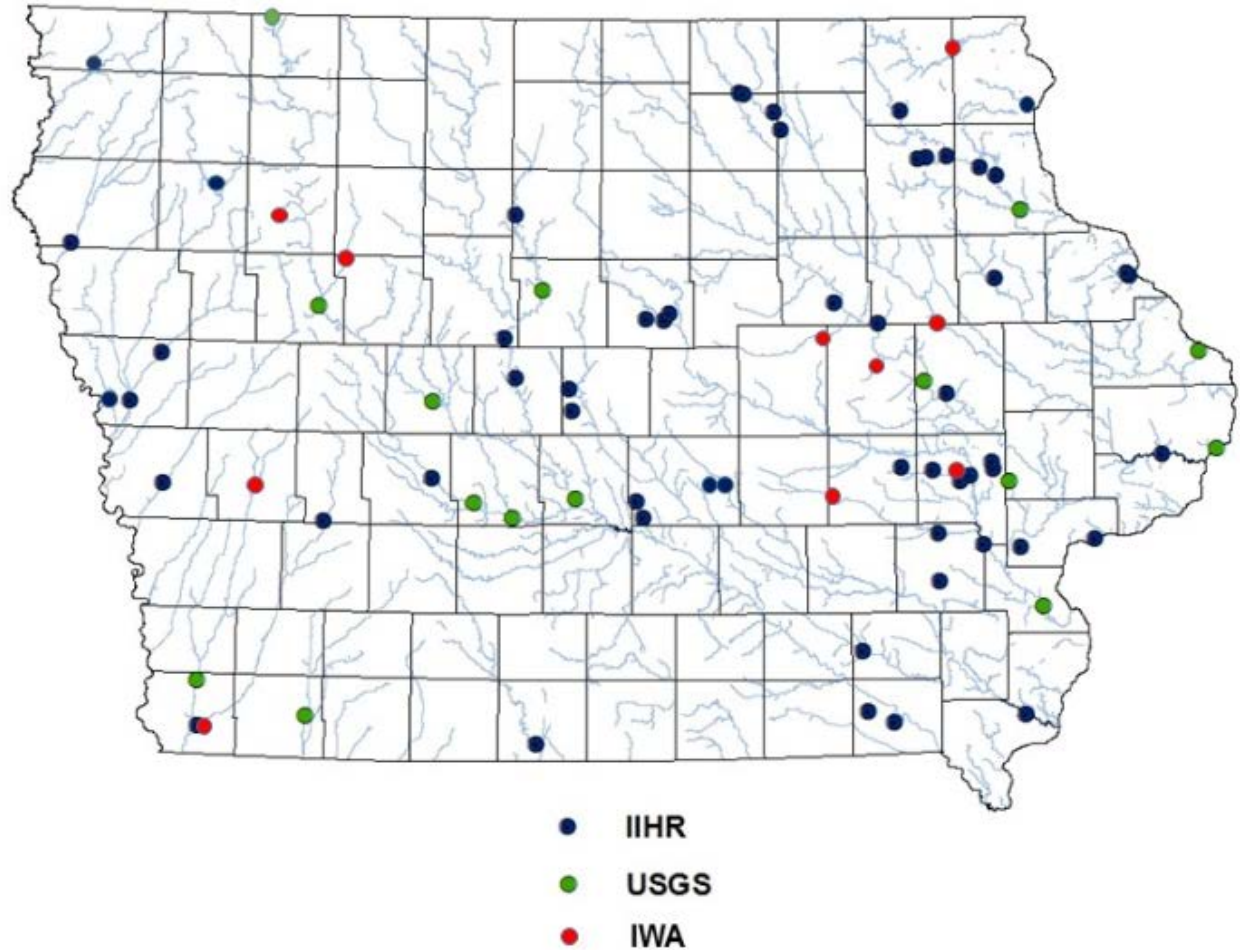


Sites

70+ sites Nitrate-N

20-25 sites

- Temperature
- pH
- SC
- DO
- Turbidity



Site infrastructure



Small Streams



IIHR Water Quality
Sensor Setup



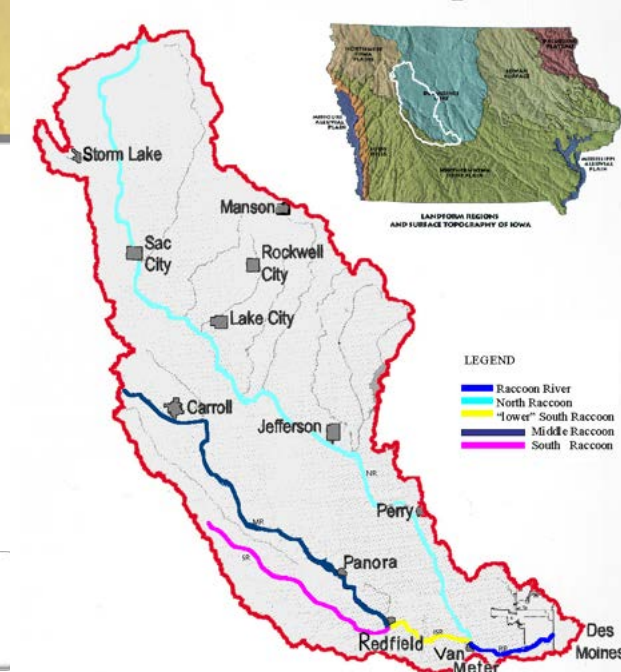
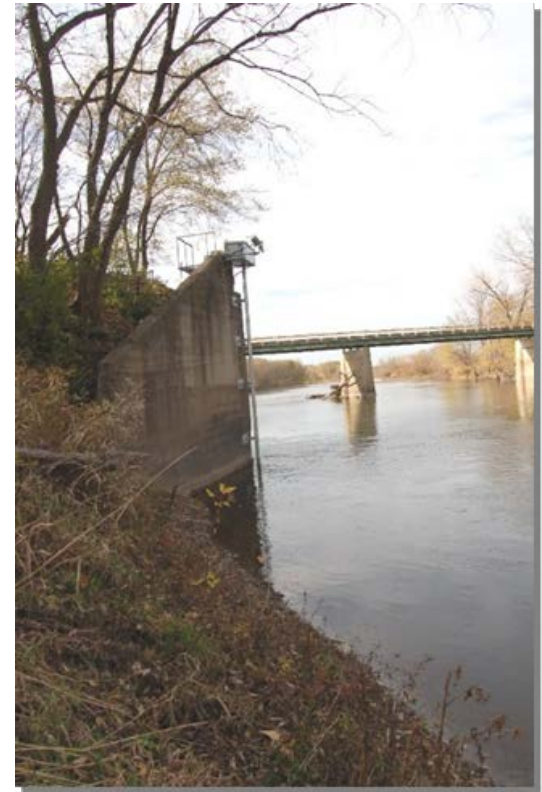
Hach Nitratax SC Plus

UV absorption at 210 nm

5mm pathlength quantifies NO_x
0.1-25 mg/L (as N)

2 mm pathlength devices
quantify up 50 mg/L

Second beam corrects for
turbidity and dissolved organic
matter



DTS 2000 Turbidimeter



Research, Education, and Service
IIHR—Hydroscience & Engineering

Form L-2

No.

Des Moines Water Company

DAILY LABORATORY CONTROL REPORT

November 12th 1911

TIME		GALLONS	POUNDS		CHLORINE			PER	PER	PER
From	To	WATER PUMPED	FED	DESIRED	LBS. FED	PER MIL. GAL.	PARTS	PER MIL. FED.	ERROR	
Midnight	8:00 A. M.	2100.000	8.4	8.8	4.0	1.480	-5			
8:00 A. M.	4:00 P. M.	3410.000	12.6	14.2	3.7	1.443	-11			
4:00 P. M.	Midnight	2500.000	11.4	10.4	4.6	1.547	+10			
Total		8010.000	32.4	33.4	Average	4.1	1.490			

River Stage, W. W. D. *99.02* Feet

Well Stage, W. W. D. *95.83* Feet

Temperature, Water at Pumps. *64.0* Deg. F.

Total Hardness, Water at Pumps. *214.5* P. P. M.

Total Iron, Water at Pumps. *0.8* P. P. M. Number of Complaints *0*

EXAMINATION OF SAMPLES

No. of Sample	Source	Time Collected	Turbidity, P. P. M.	Volume Plated	Bacteria at 20° per C. Cm.	Volume Plated	Bacteria at 37½° C. per C. Cm.	Vol. Examined for B. Coli per C. Cm.	Gas on Lactose Broth, 1st Day %	Gas on Lactose Broth, 2d Day %	B. Coli Communis Isolated
<i>4499A</i>	<i>Manhole No. 1</i>	<i>1:15</i>	<i>3</i>	<i>1.0</i>	<i>82</i>	<i>1.0</i>	<i>110</i>	<i>1 5 10</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>5000A</i>	<i>Siphon</i>	<i>1:30</i>	<i>5</i>	<i>1.0</i>	<i>182</i>	<i>1.0</i>	<i>74</i>	<i>1 5 10</i>	<i>10</i>	<i>35</i>	<i>0</i>
<i>5001H</i>	<i>Well</i>	<i>1:30</i>	<i>5</i>	<i>1.02</i>	<i>1650</i>	<i>1.02</i>	<i>1700</i>	<i>1 5 10</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>5002A</i>	<i>River</i>	<i>1:15</i>	<i>50</i>	<i>.0004</i>	<i>2500</i>	<i>.0004</i>	<i>10500</i>	<i>1 5 10</i>	<i>45 20 0</i>	<i>60 25 5</i>	<i>0</i>
<i>5003A</i>	<i>Pump</i>	<i>1:45</i>	<i>3</i>	<i>1.0</i>	<i>20</i>	<i>1.0</i>	<i>70</i>	<i>1 5 10</i>	<i>0</i>	<i>0</i>	<i>None</i>
<i>5004H</i>	<i>Tap</i>	<i>1:00</i>	<i>3</i>	<i>1.0</i>	<i>25</i>	<i>1.0</i>	<i>15</i>	<i>1 5 10</i>	<i>0</i>	<i>0</i>	<i>None</i>

Remarks *Flooding pump started at 9:30 PM 11.*

Signed *Dale L. Maffett*
Chemist and Bacteriologist



Jackson Candle Turbidimeter